

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A honeycomb structure comprising: porous partition walls disposed so as to form a plurality of cells extending in an axial direction, wherein defining that a porosity of the partition walls in a central portion of a vertical section with respect to the axial direction of the honeycomb structure is $P_i \text{ (%)}$ and that a porosity of the partition walls in an outer peripheral portion of the section is $P_o \text{ (%)}$, a relation is $P_i < P_o$, wherein the honeycomb structure is a monolithical structure and a difference between $P_i \text{ (%)}$ and P_o is within a range of about 3-10%.

2. (Original) The honeycomb structure according to claim 1, wherein defining that a pore diameter of the partition walls in the central portion is D_i and that a pore diameter of the partition walls in the outer peripheral portion is D_o , a relation is $D_i > D_o$.

3. (Currently Amended) The honeycomb structure according to claim 1, wherein wherein defining that a pore diameter of the partition walls in the central portion is D_i and that a pore diameter of the partition walls in the outer peripheral portion is D_o , the D_i and D_o have a relation of $D_i < D_o$.

4. (Currently Amended) A honeycomb structure comprising: porous partition walls disposed so as to form a plurality of cells extending in an axial direction, wherein defining that a porosity and a pore diameter of the partition walls in a central portion of a vertical section with respect to the axial direction of the honeycomb structure are $P_i \text{ (%)}$ and D_i and that a porosity and a pore diameter of the partition walls in an outer peripheral portion of the section are $P_o \text{ (%)}$ and D_o , relations are $P_i > P_o$ and $D_i < D_o$, wherein the honeycomb structure is a monolithical structure and a difference between $P_i \text{ (%)}$ and P_o is within a range of about 3-10%.

5. (Original) The honeycomb structure according to claim 1, wherein a predetermined cells are plugged at either of end faces of the honeycomb structure.

6. (Original) The honeycomb structure according to claim 2, wherein a predetermined cells are plugged at either of end faces of the honeycomb structure.

7. (Original) The honeycomb structure according to claim 3, wherein a predetermined cells are plugged at either of end faces of the honeycomb structure.

8. (Original) The honeycomb structure according to claim 4, wherein a predetermined cells are plugged at either of end faces of the honeycomb structure.

9.-16. (Canceled)

17. (New) The honeycomb structure according to claim 2, wherein defining that a pore diameter of partition walls in an intermediate portion is D_m , the intermediate portion being between the central portion and the outer peripheral portion, a relation is $D_i > D_m > D_o$.